UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,060	01/03/2006	Katsushige Amano	2005-1990A	8658

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WENDEROTH, LIND & PONACK L.L.P.
1030 15th Street, N.W.
Suite 400 East
Washington, DC 20005-1503

EXAMINER
BRYANT, DOUGLAS J.

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/563,060	AMANO ET AL.
	Examiner	Art Unit	
	DOUGLAS BRYANT	4123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>03 January 2006</u>.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>17-31</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>17-31</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>03 January 2006</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☒ All b)☐ Some * c)☐ None of:
      1.☒ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>01/03/2006</u>.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____ .

U.S. Patent and Trademark Office
PTOL-326 (Rev. 08-06)   Office Action Summary   Part of Paper No./Mail Date 20090327

DETAILED ACTION

Claim Construction

The following elements in claims 29-31 are not construed under 35 U.S.C. 112,

6th paragraph because "for" was not used:

a) Regarding claim 29 line 3, "selecting step of", line 5 and 7, "setting step of"

b) Regarding claim 30, line 5, "selecting means", line 7 and 9, "setting

   means"

c) Regarding claim 31, line 5, "selecting means", line 7 and 9, "setting

   means"

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 17-31 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

Regarding claim 17, the claim is directed to a "device" or machine, but fails to

disclose physical "things". The claim elements, task selector and high and low priority

setters, are components of an OS and hence nothing more than software (see figure 1

and page 6-7). Since the body of the claim only recites software elements, it therefore is

not any of a process, machine, manufacture, or composition of matter. Since under 35

U.S.C. 101, a device or a combination of devices is defined as having functionalities to

effect an action or a result, and the software is not physical devices or objects. Thus,

the claim only recites software per se (descriptive material covered in MPEP 2106.01), which constitute as non- statutory subject matter.

Regarding claim 29, while the claims recite a series of steps or acts to be performed, a statutory "process" under 35 U.S.C. 101 must (1) be tied to a particular machine or apparatus or (2) transform a particular article to a different state or thing (See In re Bilski, 545 F.3d 943, 88 USPQ2d 1385 (Fed Cir. 2008)). The instant claims neither transform a particular article nor positively tie to a particular machine or apparatus and therefore do not qualify as a statutory process.

Regarding claims 30 and 31, while the claims recite a series of steps or acts to be performed, a statutory "process" under 35 U.S.C. 101 must (1) be tied to a particular machine or apparatus or (2) transform a particular article to a different state or thing (See In re Bilski, 545 F.3d 943, 88 USPQ2d 1385 (Fed Cir. 2008)). The instant claims neither transform a particular article nor positively tie to a particular machine or apparatus that accomplishes the claimed method steps, and therefore do not qualify as a statutory process. A computer readable recording medium and transmission medium is an insignificant extra-solution activity that will not transform an unpatentable principle into a patentable process. The mere recitation of structure in a method claim does not convert an otherwise non-statutory process claim into a statutory one. See *Ex parte Langemyr*, Appeal 2008-1495 (BPAI 2008).

Furthermore, claim 31 is directed to a transmission medium carrying a task schedule program, which constitutes as nonstatutory subject matter (see MPEP 2106 and *In re Nuitjen*, Docket no. 2006-1371 (Fed. Cir. Sept. 20, 2007)(slip. op. at 18)).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 17-18 and 22-31 are rejected under 35 U.S.C. 102(b) as being

anticipated by Takeuchi et al. (Takeuchi) EP application 0798638 A2.

Regarding claim 17, Takeuchi teaches a task scheduling device for realizing a

multitask processing by performing scheduling of a plurality of tasks, the device

comprising: a task selector which selects a task of the highest priority among the

plurality of tasks (abstract, line 15-18), as a task to be executed; a high priority setter

which cyclically sets the priority of a specific task among the plurality of tasks to a first

predetermined priority every predetermined time interval T (Col 5, lines 45-46); and a

low priority setter which cyclically sets the priority of the specific task to a second

predetermined priority lower than the first priority before the time interval T elapses and

after the priority of the specific task is set to the first priority by the high priority setter

(Col 5, lines 55-59; Col 8, lines 47-52).

Regarding claim 18, Takeuchi teaches the task scheduling device according to

claim 17, wherein the low priority setter cyclically sets the priority of the specific task to

the second priority upon lapse of a predetermined time duration TH after the priority of

the specific task is set to the first priority by the high priority setter, the time duration TH

being shorter than the time interval T (Col 8, lines 47-52).

Regarding claim 22, Takeuchi teaches the task scheduling device according to

claim 17, further comprising a task priority table in which the plurality of tasks and the

respective priorities thereof are recorded in correlation with each other, wherein the high

priority setter cyclically sets the priority of the specific task to the first priority by writing

the first priority as the priority assigned to the specific task in the task priority table (Col

8, lines 36-42); the low priority setter cyclically sets the priority of the specific task to the

second priority by writing the second priority as the priority assigned to the specific task

in the task priority table (Col 8, lines 42-44); and the task selector refers to the task

priority table to select the task whose priority is the highest among the plurality of

priorities recorded in the task priority table, as the task to be executed (Col 8, lines 36-

39).

Regarding claim 23, Takeuchi teaches the task scheduling device according to

claim 22, further comprising a specific task table in which the specific task, the first

priority, and the second priority are recorded in correlation with each other, wherein the

high priority setter refers to the specific task table to read out the first priority recorded in

the specific task table if information relating to the specific task has been recorded in the

specific task table and to write the readout first priority as the priority assigned to the

specific task in the task priority table (Col 20, lines 9-15), and the low priority setter

refers to the specific task table to read out the second priority recorded in the specific

task table if the information relating to the specific task has been recorded in the specific task table, and to write the readout second priority as the priority assigned to the specific task in the task priority table (Col 20, lines 20-24).

Regarding claim 24, Takeuchi teaches the task scheduling device according to claim 23, wherein the specific task writes the information relating to the specific task in the specific task table, and erases the recorded information from the specific task table (Col 8, lines 49-52).

Regarding claim 25, Takeuchi teaches the task scheduling device according to claim 17, wherein at least one of the high priority setter and the low priority setter is realized as a function of an operating system (Col 8, lines 36-37;Col 9, lines 7-11).

Regarding claim 26, Takeuchi teaches the task scheduling device according to claim 25, wherein at least one of the high priority setter and the low priority setter is realized as an interrupt handler (Col 8, lines 49-50).

Regarding claim 27, Takeuchi teaches the task scheduling device according to claim 17, wherein at least one of the high priority setter and the low priority setter is realized as a function of the specific task (Col 9, lines 11-15).

Regarding claim 28, Takeuchi teaches the task scheduling device according to claim 27, wherein at least one of the high priority setter and the low priority setter is realized as a signal handler (Col 9, lines 54-55).

Regarding claim 29, Takeuchi teaches a task scheduling method for realizing a multitask processing by performing scheduling of a plurality of tasks, comprising: a task selecting step of selecting a task whose priority is the highest among the plurality of tasks as a task to be executed (abstract, lines 15-18); a high priority setting step of cyclically setting the priority of a specific task among the plurality of tasks to a first predetermined priority every time interval T (Col 5, lines 45-46); and a low priority setting step of cyclically setting the priority of the specific task to a second predetermined priority lower than the first priority before the time interval T elapses and after the priority of the specific task is set to the first priority by the high priority setter (Col 5, lines 55-59; Col 8, lines 47-52).

Regarding claim 30, Takeuchi teaches a computer-readable recording medium recording a task scheduling program which causes a computer to function as a task scheduling device for realizing a multitask processing by performing scheduling of a plurality of tasks, the task scheduling program causing the computer to function as: a task selecting means which selects a task whose priority is the highest among the plurality of tasks as a task to be executed (abstract, lines 15-18); a high priority setting means which cyclically sets the priority of a specific task among the plurality of tasks to a first predetermined priority every time interval T (Col 5, lines 45-46); and a low priority setting means which cyclically sets the priority of the specific task to a second predetermined priority lower than the first priority before the time interval T elapses and after the priority of the specific task is set to the first priority by the high priority setting means (Col 5, lines 55-59; Col 8, lines 47-52).

Regarding claim 31, Takeuchi teaches a transmission medium carrying a task

scheduling program which causes a computer to function as a task scheduling device

for realizing a multitask processing by performing scheduling of a plurality of tasks, the

task scheduling program causing the computer to function as: a task selecting means

which selects a task whose priority is the highest among the plurality of tasks as a task

to be executed (abstract, lines 15-18); a high priority setting means which cyclically

sets the priority of a specific task among the plurality of tasks to a first predetermined

priority every time interval T(Col 5, lines 45-46); and a low priority setting means which

cyclically sets the priority of the specific task to a second predetermined priority lower

than the first priority before the time interval T elapses and after the priority of the

specific task is set to the first priority by the high priority setting means (Col 5, lines 55-

59; Col 8, lines 47-52).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Takeuchi as applied to claims 17-18 and 22-31 above, and further in view of Jordan et

al. (Jordan) EP application 0523878 A1.

Regarding claim 19, Takeuchi teaches the task scheduling device according to claim 17 but he is silent to further comprising a processed amount judger which judges whether an amount of data processed by the specific task has reached a predetermined amount after the priority of the specific task is set to the first priority by the high priority setter, wherein the low priority setter sets the priority of the specific task to the second priority when the processed amount judger judges that the processed amount has reached the predetermined amount.

However, Jordan teaches a processed amount judger which judges whether an amount of data processed by the specific task has reached a predetermined amount after the priority of the specific task is set to the first priority by the high priority setter, wherein the low priority setter sets the priority of the specific task to the second priority when the processed amount judger judges that the processed amount has reached the predetermined amount (Col 5, lines 19-23).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the teachings of Jordan into the method of Takeuchi to include a monitor (judger) to ensure that the second priority is set once a predetermined amount is reached. The modification would have been obvious because of ordinary skill in the art would have included a monitor to guarantee the efficient uses of resources of a CPU.

Regarding claim 20, Jordan teaches the task scheduling device according to claim 19, wherein the processed amount judger includes a processed amount

comparator which determines whether the processed amount has reached the

predetermined amount by comparing a variable whose value is varied with execution of

the specific task with a specified value (Col 5, lines 16-19).

Regarding claim 21, Jordan teaches the task scheduling device according to

claim 19, further comprising a buffer which temporarily stores the data outputted from

the specific task, wherein the processed amount judger includes a processed amount

comparator which determines whether the processed amount has reached the

predetermined amount by comparing the amount of data written in the buffer by

execution of the specific task with a specified value (Col 5, lines 33-36).

Conclusion

The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure. See PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DOUGLAS BRYANT whose telephone number is (571)270-7707. The examiner can normally be reached on M-F 8:00-5:00pm Est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Robertson can be reached on 571-272-4186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. B./   /Emerson Puente/
Examiner, Art Unit 4123   Primary Examiner, Art Unit 2113